









Vorkshire Philosophical Society.

# ANNUAL REPORT

FOR

MDCCCLIX.





## ANNUAL REPORT

OF THE COUNCIL

OF THE

#### YORKSHIRE

# PHILOSOPHICAL SOCIETY

FOR

#### MDCCCLIX.

## PRESENTED TO THE ANNUAL MEETING,

FEBRUARY, 1860.



#### YORK:

H. SOTHERAN, BOOKSELLER, CONEYSTREET.

1860.



#### TRUSTEES

OF

## THE YORKSHIRE MUSEUM,

APPOINTED BY ROYAL GRANT.

HON. AND VERY REV. HENRY HOWARD, D. D. SIR WILLIAM LAWSON, BART., F. S. A. ROBERT DENISON, ESQ.
REV. WILLIAM VERNON HARCOURT, F. R. S.

#### PATRONESSES

OF THE

Porkshire Philosophical Society.

HER MAJESTY THE QUEEN.

H. R. H. THE DUCHESS OF KENT.

## PATRONS.

THE ARCHBISHOP OF YORK.

DUKE OF NORTHUMBERLAND, F. R. S.

EARL OF CARLISLE, K. G., F. R. S.

LORD FEVERSHAM.

## OFFICERS OF THE SOCIETY, 1860.

#### PRESIDENT:

THE EARL OF CARLISLE, K. G., F. R. S.

#### VICE-PRESIDENTS:

THE EARL OF ZETLAND.

WM. RUDSTON READ, F. L. S.

JOHN PHILLIPS, F. R. S.

REV. W. V. HARCOURT, F. R. S.

CHAS. W. STRICKLAND.

REV. WILLIAM HEY.

THOMAS ALLIS, F. L. S.

REV. JOHN KENRICK.

#### TREASURER:

WILLIAM GRAY, F. R. A. S., F. G. S.

#### COUNCIL:

Elected 1858....REV. ISAAC SPENCER.

J. P. PRITCHETT.

S. W. North.

Elected 1859.... The Hon. & Very Rev. the Dean of York.

WILLIAM REED, F. G. S.

O. A. Moore.

Elected 1860....F. W. CALVERT.

ROBERT DENISON.

W. D. Husband.

REV. JOHN LEES.

WILLIAM PROCTER.

REV. CANON ROBINSON.

## SECRETARY:

T. S. Noble, F. R. A. S.

## CURATORS:

GEOLOGY AND MINERALOGY.	WILLIAM PROCTER.
Comparative Anatomy	THOMAS ALLIS, F. L. S.
British Ornithology	W. RUDSTON READ, F. L. S.
INSECTS AND CRUSTACEA	REV. WILLIAM HEY.
ANTIQUARIAN DEPARTMENT .	REV. JOHN KENRICK, F. S. A.
LIBRARY	REV. THOMAS BAYLY.
BOTANY	OSWALD ALLEN MOORE.
Observatory & Meteorology, under the Care of a Committee consisting of	THE REV. W. V. HARCOURT, F. R. S. W. GRAY, F. R. A. S., F. G. S. JOHN FORD. REV. WILLIAM HEY. T. S. NOBLE, F. R. A. S.
	11. S. NOBLE, F. R. A. S.

## KEEPER OF THE MUSEUM:

WILLIAM S. DALLAS, F. L. S.

## SUBCURATOR OF THE MUSEUM & GARDENS:

HENRY BAINES.

## REPORT OF THE COUNCIL

OF THE

#### YORKSHIRE PHILOSOPHICAL SOCIETY,

FEB. 7, 1860.

In presenting the Members of the Yorkshire Philosophical Society with their Report for the year 1859, the Council regret that the expenditure of the year has been so heavy as almost to exhaust the balance in the Treasurer's hands from the year 1858. They have, nevertheless, the satisfaction to observe that the apparent diminution of the resources of the Society is not due to any falling off in its prosperity, but simply to an extraordinary expenditure. At the same time the Council confidently believe, that, when the members are made acquainted with the objects for which this expense has been incurred, they will agree that a sound discretion has been exercised in the outlay, and that, by increasing the attractiveness of the Museum, it will ultimately tend to the advantage of the Society. principal portion of this extraordinary expenditure consists of the sum of £200, paid to Mr. Wm. Bean, of Scarbro', for one third part of his extensive Collection of Fossils, brought together by the unceasing activity of nearly forty years. the month of July last the Council were informed that this valuable collection, consisting to a great extent of Fossils from the strata of the Yorkshire Coast, and including numerous specimens described by Professor Phillips, was offered for sale

for the sum of £600. An arrangement was proposed by which the British Museum would take one half of the collection for £300,—and two private collectors taking another sixth, the remainder (one third) was offered to the Society for the sum above mentioned.

The Council being desirous of carrying out the plan of forming a complete series of Yorkshire fossils, mentioned in their report for the year 1858, and understanding that Mr. Bean's collection contained numerous fine specimens, many of them of extreme rarity, immediately sent the Keeper of the Museum to Scarbro', to inspect the collection and ascertain whether they would be justified in expending such a sum as £200 in the purchase of the portion offered to the Society. His report being favourable, the Council determined to accept the offer immediately, especially, as they were informed that, from various causes, such as the abandonment of quarries or the increasing inaccessibility of the beds, many of the Yorkshire fossils would probably be with difficulty obtained unless secured at once. Mr. Dallas went to Scarbro' on the 1st of August with Mr. Woodward, of the British Museum, to effect the division of the fossils, and as there were in most cases two or more specimens of each species, the Society obtained for its share representatives of nearly every form contained in Mr. Bean's collection. unique specimens were divided in proportion to the amount paid by each purchaser; and the arrangement made with regard to the types of species contained in the collection was, that the Yorkshire Philosophical Society should have all those figured by Professor Phillips and Messrs. Young and Bird, in their works on the Geology of Yorkshire, and the British Museum those described by Messrs. Morris and Lycett, in the Memoirs of the Palæontographical Society. The total number of specimens obtained is estimated by the Keeper of the Museum at about 5,000,—this is a low estimate. The total cost of these (including travelling expenses, packing, and carriage) amounts to £217. 8s. 4d.

The other extraordinary expenses incurred during the past year were for purposes of necessity. The beautiful ruins of Saint Mary's Abbey, the greatest ornaments of our grounds, appeared to be rapidly hastening to decay,—so rapidly, in fact, that, independently of its being the duty of the Society to watch with the most jealous care over the preservation of these interesting monuments of the past, considerable fears were entertained, that unless something was done to stop the progress of dilapidation, the ruins might ere long become dangerous to the visitors to the Gardens. Under these circumstances the Council requested Mr. G. Fowler Jones to inspect the ruins, and report upon their condition. That gentleman found that in many places the mortar had been completely washed out from between the stones, and that the grass and wall plants growing in the joints, however advantageous to the picturesque effect of the ruins, were very injurious to their stability. roof of the Hospitium and the end wall of the upper room of that building, were also stated to be in an unsafe condition, and Mr. Jones recommended that the necessary repairs should be executed without loss of time. The work was accordingly performed under the superintendence of Mr. Jones, and it is hoped that these interesting objects are now in a condition to resist the elements for many years to come. The total expense of these repairs was £41. 16s. 6d.

The attention of the Council having been called to the bad state of the Carriage way and of the Terrace in front of the Museum, especially during wet weather, it was resolved in the course of last summer to put them in a proper state of repair. It was at first thought that a layer of asphalte applied over the existing broken surface would have sufficed, but when this was tried on the terrace, it was found that the inequalities of the hard surface of the old asphalte were reproduced on the new surface. It was therefore resolved that the carriage way should be entirely broken up and relaid, and this has been satisfactorily effected at an expense of £18.

In accordance with the engagement mentioned in the last year's report, Mr. Dew, of the British Museum, visited York in the month of May, and devoted three weeks principally to the development of the specimen of *Plesiosaurus Zetlandicus*, by clearing away the fragments of the matrix from the fossil, wherever this was practicable. This was a task requiring the

greatest care and judgment for its execution, and Mr. Dew has effected it so satisfactorily as to have added far more to the value of the specimen than the sum of £18, which was paid to him for his services. It is now one of the most interesting and valuable fossils in the Museum. Mr. Dew also found time to operate upon one or two other specimens of Saurian remains in the collection, one of which, the large *Teleosaurus Chapmanni*, formerly placed in the Vestibule, has been greatly improved.

In fitting up the new rooms, the Council have necessarily been somewhat straitened by the feeling that they were incurring a heavy responsibility in exceeding the amount subscribed to the "Museum Enlargement Fund." They nevertheless considered it to be their duty to push forward the work, feeling convinced that nothing can tend so much to the welfare of the Society, as a proper degree of activity in promoting the objects for which it exists. With this view they proceeded early in the year 1859 to fit up the new room at the end of the Osteological room, for the reception of Mr. Rudston Read's valuable collection of British Birds, which during the spring was moved into its new position by Mr. D. Graham. Here the birds are better displayed than in the apartment formerly devoted to them; and the change has this further advantage, that one of the greatest ornaments of the Museum is placed in an appropriate and prominent position. A large glass case which occupies one corner of the room will serve for the reception of most, if not the whole, of the British Mammalia, and as the Council are most anxious to fill up this void in the collections, they earnestly beg any of the members who may have the opportunity, to assist them in procuring specimens, especially of the smaller British Quadrupeds. The collections of British Echinodermata and Crustacea, which are very imperfect, have been placed in one of the table cases in this room. They will eventually be transferred to the gallery cases, where they will be accompanied by collections of other groups of invertebrate animals, when the table cases will be vacant to receive the collection of British shells. Wall-cases in the gallery will be occupied by specimens of British Reptiles and Fishes, and thus

the whole series of native animals will be brought together in one room.

In the middle room, the Council have only fitted up the long central case, in which the *Plesiosaurus Zetlandicus* now reposes, together with the remains of several other Reptiles from the Lias of Yorkshire. The remainder of the Liassic Saurian fossils will also be placed in this case.

The third room, which is intended to contain the collection of Yorkshire fossils, has been fitted up for this purpose with cases similar in plan to those in the old Geological room, and with gallery-cases like those in the British Bird room. Keeper of the Museum has already placed a considerable number of specimens in the cases, and the work will be continued until the whole collection is arranged. When this is accomplished the Council believe that there will be no finer local Geological collection to be seen anywhere. At the same time care will be taken to represent the Yorkshire strata in the general Geological collection, by means of limited series of typical or characteristic species. The numerous specimens of fossils from strata occurring in other parts of England and on the continent of Europe, obtained from Mr. Bean, will serve to fill up many spaces in the general collection, and assist greatly in rendering it more uniform and complete. Keeper of the Museum hopes to have the whole of the fossils grouped in the cases in the course of the next three months, when the entire suite of the new rooms will be opened to the public.

The tradesmen's accounts for work done up to the present date, in fitting up the interior of the new rooms, amount in all to £574. The balance of the "Museum Enlargement Fund" to meet this will only be £121 when all outstanding subscriptions are received, so that the liabilities of the Society on account of the new rooms are at present £453. The additional work required for the completion of the third room, consists in the making of a table case for the centre of the room and the painting of the wood work, &c. As it is exceedingly desirable not to burden the Society with any addition to its debts, and as these expenses can only be defrayed slowly out of the ordinary

income, the Council earnestly solicit contributions from those who have not already subscribed to the Museum Enlargement Fund.

It will be in the recollection of the members that, at the last annual meeting of the Society, a subscription was proposed for the purpose of erecting some permanent memorial of the esteem and respect entertained for the late Rev. Charles Wellbeloved. A considerable sum having been collected for this purpose, from members of the Society and other friends, the Committee appointed to carry out the wishes of the subscribers obtained a copy of the only existing portrait of Mr. Wellbeloved, and presented this, with a marble commemorative tablet, to the Society, recommending that the former should be suspended in the Vestibule of the Museum, and the latter fixed in a prominent position in the Hospitium. Both these recommendations have been carried out.

The principal additions to the LIBRARY during the past year, have consisted of Mc. Lauchlan's great work on the Roman Remains in the North of England, presented by His Grace the Duke of Northumberland, and "Facsimiles of Select Egyptian Papyri, in the Collection of the British Museum," presented by the Trustees of that Institution. The Committee of the "Wellbeloved Memorial Fund" have also presented to the Library two important works purchased by them at the sale of the late Mr. Wellbeloved's Library, with the surplus of the fund at their disposal. These are Mr. Wellbeloved's copies of Drake's "Eboracum," and Horsley's "Britannia Romana," both enriched with MS. notes and additional plates by their late owner. This circumstance, and the fact of their having belonged to one who for so many years took the most active interest in this Society, must render these volumes very interesting additions to its Library. Two other volumes from the same source have also been presented, namely, Eckhel's "Numi Anecdoti," and Vulpes' "Strumenti Chirurgici," the latter especially valuable as serving to elucidate the examples of Roman surgical instruments, contained in the Museum. For these books the Society is indebted to Mr. Wellbeloved's successor as Curator of Antiquities, the Rev. John Kenrick.

The Curator of Antiquities reports, that the principal additions made to his Department in the present year, have been the result of excavations carried on at the Mount, which has in past times yielded so many objects of the sepulchral class to the Museum. In an excavation at the corner of Holgate Lane, a fictile urn was discovered, of a character almost unique, having the shape of a human head, with the countenance distinctly expressed. In digging for the foundation of a house on the Driffield estate at the Mount, a sarcophagus was found, bearing the name of Ælia Severa and dedicated to her manes by her husband. It was covered by an incised slab, dedicated by Cæresius, a soldier of the Sixth Conquering Legion, to the manes of his wife, Flavia Augustina, and two children who died in their infancy. The upper part of the stone represents the parents and their children. The sarcophagus contained the remains of a body which had been enclosed in liquid plaster, a mode of interment very common in Roman York, but rare elsewhere. Near the same place another sarcophagus was found, containing a similar interment, but without any inscription. All these antiquities have been given to the Museum, and the names of the donors will be found in the lists appended to the Report.

From Dr. Smart, of Northiam, have been received several specimens of what has been called Kimmeridge Coal Money, but is really the refuse of the pieces of this material which had been worked by the lathe into bracelets and other ornaments, in the Roman times. The cabinet of coins has received the accession of some silver denarii, among which is one of the family Memmia, and an Attic tetradrachm, bearing the names of Diocles and Medeius.

The only addition to the collection of MINERALS has consisted of a case of specimens presented by the Rev. Danson Richardson Roundell, to whom the Society was already indebted for the magnificent *Ichthyosaurus* exhibited in the new room. The collection sent by Mr. Roundell included none that call for special notice.

Besides the important series of fossils purchased from Mr. Bean and already referred to, the Geological collection has

been enriched by numerous specimens principally from the gault and chalk of the South of England, presented by Wm. Reed, Esq., and also by a series of fossils from the red chalk of Speeton, presented by Mr. E. Tindall, of Bridlington. The latter were of particular importance, as the Society's collection was previously almost destitute of fossils from the red chalk. The collection of Minerals presented by Mr. Roundell was accompanied by a few fossils, chiefly from the oolites of the South of England.

The Curator of Entomology reports, that the Entomological collections are on the whole in good condition, though requiring more time for their re-arrangement than it has yet been found practicable to bestow upon them. No additions of importance have been made during the past year.

The report of the Curator of Botany states, that the only addition to the collections under his charge is the valuable British Herbarium of the late Mr. Samuel Hailstone, a deservedly renowned Yorkshire Botanist. In presenting it to the Society, his family expressed a wish that it should be kept separate under the name of the "Hailstone Herbarium." It is arranged according to the Linnæan system; the Society's Botanical collection, including the combined Herbaria of Middleton and Dalton, has been arranged in accordance with the Natural system of De Candolle. The Hailstone Herbarium, besides being a good general collection, is peculiarly rich in the genera Rosa and Rubus, to which it is well known that Mr. Hailstone paid great attention. The Curator proposes, when suitable arrangements can be made for that purpose, to render this Herbarium available as far as possible for the use of the members.

The Curator of Meteorological Instruments has furnished a table containing the results of observations made in 1859, from which it appears that the rain-fall has again been below an average by 2.9 inches. The temperature also has been below a mean of 20 years by 1° of Fahrenheit's thermometer, but precisely the same as that of 1858, namely, 46.6° F. The range of the barometer has been extraordinary. In November the mercurial column rose as high as 30.718, and fell in the same month as low as 28.464, a difference of  $2\frac{1}{4}$  inches. The tem-

perature of July and August was slightly above a mean, with an amount of rain below an average quantity. A splendid harvest was a coincident event.

METEOROLOGICAL REGISTER, YORK, 1859.

BAROMETER.			RAIN.		THERMOMETER.					or below	Wind.	
	Highest.	Lowest.	Mean.	Inches.	Days.	Average Max.	Average Min.	Mean Temp.	Highest.	Lowest.	Nights at or l 32°.	Prevailing W
Jan.	30.688	29.140	29.960	1.07	12	42.8	33.2	38.0	52.5	24.5	13	W.
Feb.	30.626	29.196	29.793	1.04	11	43.7	33.4	38.6	53.0	26.5	13	w.
Mar.	30.396	28.982	29.762	1.58	11	48.7	37.5	43.1	55.5	24.0	9	w.
April	30.260	29.136	29.690	2.37	18	48.7	36.0	42.4	73.0	25.0	10	E.
May	30.358	29.772	29.954	0.36	3	59.4	40.3	49.9	73.0	28.5	2	E.
June	30.154	29.696	29.870	2.47	14	63.7	49.2	56.5	74.0	42.0		E.
July	30.361	29.940	30.006	2.37	7	68.4	54.0	61.2	82.0	47.0	_	W.
Aug.	30.340	29.394	29.837	2.59	8	67.4	52.6	60.0	78.0	41.0		w.
Sept.	30.320	29.350	29.813	2.15	18	59.1	45.2	52.2	69.0	35.0		s.
Oct.	30.098	28.912	29.603	2.08	11	51.8	40.2	46.0	68.0	19.0	11	E.
Nov.	30.718	28.464	29.828	1.59	14	42.8	35.6	39.2	52.5	19.5	17	E.
Dec.	30.798	28.853	29.411	1.70	11	36.1	28.2	32.1	49.5	6.5	26	S.E.
	30.798	28.464	29.794	21.37	138	52.7	40.5	46.6	82.0	6.5	101	

Returns of the Rain-fall in several localities have been kindly furnished by correspondents. They are printed in the following table.

RAIN-FALL, 1859.

-	York.	Middleton.	Malton.	Huggate.	Ackworth.	Sheffeld.	Settle.	Todmorden.
Jan.	1.07	1.20	1.14	1.25	0.49	1.50	4.23	4.55
Feb.	1.04	1.50	1.14	1.87	0.98	1.96	2.81	3.75
Mar.	1.58	1.64	1.69	1.63	1.76	3.51	6.62	4.81
April	2.37	2.00	2.34	1.85	3.28	4.82	2.53	3.46
May	0.36	0.25	0.15	0.37	0.70	0.33	0.00	0.84
June	2.47	1.96	2.27	1.88	2.18	3.38	2.18	2.76
July	2.37	2.00	2.44	2.12	1.61	1.49	2.06	2.49
Aug.	2.59	4.53	3.27	4.38	4.35	6.09	4.22	6.72
Sept.	2.15	3.45	3.34	4.00	2.28	3.17	5.06	7.01
Oct.	2.08	2.20	2.09	2.00	2.17	4.25	3.00	4.78
Nov.	1.39	1.95	1.93	2.25	1.79	3.15	4.71	3.54
Dec.	1.70	2.40	2.40	2.85	1.87	3.09	3.29	3.39
	21:37	25.08	24.20	26.45	23.46	36.74	40.71	48.10

The Lectures delivered in the Theatre of the Museum in the year 1859, have been scarcely so numerous as in the preceding year. Early in the year the Council engaged Mr. Gosse to deliver two lectures "On Examples of Divine Contrivance in the Structure of the Lower Animals." Mr. Procter delivered two lectures "On the Natural History and Mineralogy of Precious Stones," and the Rev. John Lees two "On William of Wykeham." Mr. Greenhow also gave an account of his personal experience at the Siege of Lucknow; and Mr. Davies his fourth "Antiquarian Walk through York." In the autumn and winter session, the Society has been indebted to the Rev. Thomas Myers, for three lectures "On Mental and Moral Science;" to Mr. Procter, for one "On Induced Electricity;" and to Capt. O'Brien, for an account of the "Currents of the Ocean." Abstracts of the papers read at the Monthly Meetings of the Society are appended to this Report.

The Council must now return to the consideration of the financial position of the Society. The income, as will be seen from the account for the year, is still in a flourishing state, being nearly £23 more than that of last year. At the same time the general expenses of the Society have been low, so that, but for the extraordinary outlay mentioned at the commencement of this Report there would have been an excess of income over expenditure of £206. The extraordinary expenditure of a sum amounting in all to £330, however, threw a balance of £124 to the debtor side of the account, but as the balance at the credit of the Society at the close of the year 1858 was £137, there is still a balance of £13 in the Treasurer's hands.

The number of members elected since the last annual Meeting is sixteen, and the loss of members by death and resignation has also been sixteen; but as the widows of five deceased members have continued their subscriptions, and one of them had compounded, there is an actual increase of six subscribing members in the year. Of Lady subscribers six have resigned, whilst only three have been admitted; but on the other hand only two associates have withdrawn, and the number elected has been six. The amount taken at the Gate during the past year exceeded that taken in 1858, but the receipts at the Swimming Bath have slightly fallen off.

The Council regret to have to announce that they have received from Mr. Kenrick an intimation that circumstances will prevent his retaining the office of Honorary Secretary, which he has now held with great benefit to the Society for five years. The Council feel it unnecessary to dwell upon the high qualifications possessed by Mr. Kenrick, or the zeal which he has displayed in the discharge of the duties of his office. The Council, in proposing him as one of the Vice-Presidents, desire at once to mark their sense of the value of his services, and to secure for the Society the continued benefit of his advice and assistance. As, however, the circumstances under which it was considered necessary to have two Honorary Secretaries no longer exist, and as Mr. Noble, who is constantly resident in the immediate vicinity of the Museum, has expressed his willingness to undertake the whole of the Secretarial duties,

with the assistance of the Keeper of the Museum, the Council have not thought it requisite to propose a successor to Mr. Kenrick.

The Honorary Members proposed by the Council for election at this Meeting are, Mr. John Hope Shaw, of Leeds, and Mr. S. P. Woodward, of the British Museum. The former gentleman is one of the leading members of the Leeds Philosophical Society, and has taken the greatest interest in the proposed plan for the co-operation of all the Philosophical Societies of Yorkshire, of which he is in fact the originator. Mr. Woodward's high position as a Zoologist and Palæontologist, and the interest which he takes in the welfare of this Museum, render his enrolment in the list of Honorary Members particularly desirable. Of Foreign Honorary Members, the Council also propose two, namely, Mr. J. D. Dana, the celebrated American Mineralogist and Zoologist, and M. Boucher de Perthes, of Abbeville, who has enriched our Library with several important works, and whose researches into the early history of mankind have lately attracted so much attention.

Amongst the losses which the Society has sustained during the past year, there are some to which the Council cannot avoid alluding more particularly. The late Lord Londesborough had been for many years a member of the Society, and had contributed with his accustomed liberality to its funds. The Library also is indebted to him for several valuable Antiquarian works, especially the beautiful illustrations of his own collection of Antiquities, contained in the "Miscellanea Graphica." Lord Londesborough was one of the Vice-Presidents of the Society at the time of his death. The death of Earl de Grey diminishes the list of the contributors to the original Building Fund and also that of the Society's Trustees. The Society was likewise indebted to his lordship for the liberality with which he gave up his interest in the land granted to the Society by the Crown, and for a liberal contribution to the Museum Enlargement Fund. Of the Honorary Members the Society has to regret the loss of Sir Thomas Macdougal Brisbane, Bart., who died on the 28th January, in the present year. Sir Thomas entered the army in 1789, when only sixteen years of

age, and served for many years with great distinction. During the latter part of his military career he paid much attention to Astronomy, which he continued to study with much zeal and success to the close of his long life; his position as Governor of New South Wales enabled him to found the Observatory at Paramatta, from which most important results have been obtained; and on his return to this country, he established a magnificent Observatory at Makerstoun, near Kelso, where astronomical and magnetical observations of the highest value have been carried on for many years. Our Library contains several volumes of Observations made at this Observatory, and presented by Sir Thomas Brisbane.

The list of Foreign Honorary Members of this, as of many other Societies, has, during the year 1859, sustained the loss of one of its brightest ornaments, in the name of Alexander Von Humboldt. The Council feel it to be unnecessary to pronounce any eulogium upon this illustrious philosopher, whose labours, extending to the very close of a life of 90 years, have been subservient to the progress of almost every branch of science. His wonderful work, entitled "Cosmos," contains a physical description of the Universe, which must astonish every one by the extraordinary grasp of mind which it exhibits.

Five members of Council, Mr. Davies, Mr. Ford, Rev. Henry Short, Mr. Edward Swaine, and Mr. George Wilson, retire by rotation, and as Mr. Noble was also a member of Council previous to his undertaking the duties of Secretary, there are in all six new members to be elected. The Council propose the Earl of Zetland as a Vice-President in the room of the late Lord Londesborough.

# TREASURER OF THE YORKSHIRE PHILOSOPHICAL SOCIETY IN ACCOUNT FOR THE YEAR 1859.

		,
Cr. RECEIPTS.		EXPENDITURE. Dr.
1859.	£. s. d.	
Annual Subscriptions and Arrears	651 14 0	
Admission of New Members	60 0 0	
Ladies' Subscriptions	39 1 0	
Associates	15 0 0	
Keys of the Gates	38 5 0	
Rents	96 11 6	
Money received at the Gates	214 13 1	
•	148 11 2	
Swimming Bath (Gross)		
Sale of Guide to Antiquities	18 16 0	
,, Catalogue of Library	0 11 6	
Temporary Subscriber	1 0 0	
Use of Tent	12 0 0	
		Labourers 154 7 0
		Attendant (Hospitium) 8 14 0
		C. Wakefield 6 0 0
		554 3 0
		Interest on Debt to Insurance Com-
		pany, to 31st Dec., 1859 73 3 0
		Museum Gardens, &c.:
		General Repairs, &c 149 7 5
		Purchase and Preparation of Speci-
		mens:
		Bean's Fossils and pack-
		ing
		Dew for Plesiosaurus . 18 1 0
		Graham removing birds 34 16 2
		Sundries 0 13 2
		<u>— 263 9 8</u>
		Library, Books, &c
		Swimming Bath:
		Keeper's Salary 30 0 0
		Water Rent 30 0 0
		Repairs and Incidental
		Expenses 10 12 1
		70 12 1
		Miscellaneous Expenses:
		Printing, Advertising,
		Stationery, &c 25 15 5
		Coals and Gas 69 6 4
		Repairs of Abbey 36 11 0
		Asphalting Walk 18 0 0
		Expenses of Band 15 13 1
1		" " Lectures 17 11 4
		" " Observatory 5 5 5
III-t-1 To come	906 9 9	,, ,, Aquarium 1 0 3
Total Income		, , , , , , , , , , , , , , , , , , , ,
Excess of Expenditure	124 0 2	197 14 2
£1	1420 6 5	27.400
₩.1	1120 0 0	£1420 6 5
Permanent Debt:		Permanent Debt:
Yorkshire Insurance		
Company £1900 0 0		Yorkshire Insurance
Five Members at £50		Company£1900 0 0
each		Due to Five Members
Caul		at £50 each 250 0 0
2150 0 0		0170 0 0
Balance in Treasurer's		Due from Treesquer Ion
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#### **MEMBERS**

ELECTED SINCE FEB., 1859.

#### 1859.

William Brady, Heworth.
W. H. Dale, Coney Street.
W. Ellis, Skeldergate.
Miss Gilbert, St. Mary's.
Mrs. Graham, St. Mary's.
Thomas Hodgson, 25, Stonegate.
R. W. Hollon, St. Mary's.
Edward Houlden, St. Sampson's Square.
John Pierson, 75, Mickleyate.
Thomas Simpson, 34, Gillygate.
George Spurr, King's Square.
Mrs. Taylor, 1, Bootham.
Miss Wilson, Fulford.

#### 1860.

Rev. Ishmael Fish, Castle Howard. C. Halley, High Ousegate. William Wrightson, Peckitt Street.

#### ASSOCIATES.

1859.

Thos. Brady, Low Ousegate.
W. H. Dykes, 40, Blossom Street.
T. N. Fowler, Spurriergate.
Frederick Needham, York.

#### 1860.

C. Roberts, New Street, York.H. T. Whitling, York County Hospital.

## LADY SUBSCRIBERS

ADMITTED 1859.

Miss E. Clayton, New Walk Terrace.
Miss Miller, Minster Yard.
Mrs. T. Starkey, Tang Hall, Heworth.

1860.

Miss Bebb, 24, Bootham. Mrs. Jackson, Coney Street.

#### LECTURES

#### DELIVERED DURING THE YEAR 1859.

JAN. 12.—On Lucknow; by H. GREENHOW, Esq.

Jan. 22 and Feb. 2.—On William of Wykeham; by the Rev. John Lees.

FEB. 10 and 17.—On Examples of Divine Contrivance in the Structure of the Lower Animals; by P. H. Gosse, Esq., F. R. S.

MARCH 2.—An Antiquarian Walk through York; by R. Davies, Esq., F. S. A.

MARCH 16 and 23.—On the Natural History and Mineralogy of Precious Stones; by W. Procter, Esq.

Oct. 12.—On Induced Electricity; by W. Procter, Esq.

Oct. 26, and Nov. 9 and 23.—On Mental and Moral Science; by the Rev. Thos. Myers.

DEC. 7.—On the Currents of the Ocean; by CAPT. O'BRIEN.

#### COMMUNICATIONS

TO THE

## MONTHLY MEETINGS,

1859.

MARCH 1.—The Rev. John Kenrick read a paper "On a Coin of Mariniana" presented by T. S. Noble, Esq. Mr. Kenrick remarked that the imperial personage whose image appears on this coin, is absolutely unknown to History. Vaillant invented a pleasing romance, that she was the wife of the unfortunate Emperor Valerian, who was taken prisoner by Sapor, King of Persia, and that having died in captivity, her son Valerian II. honoured her memory by striking this coin. But this romance, like many others, has been destroyed by the merciless hand of the chronologer. From a date on one of the medals, it appears that she must have died six years before Valerian's Persian expedition. As Valerian was twice married, and his sons, Gallienus and Valerian, were only half-brothers, it is probable that she was his second wife.

The coin forming the subject of this communication is of debased silver, and of rude execution; the form of the letters is unclassical. These characteristics suit the age in which it was produced. The days were evil. The succession to the imperial throne was the subject of perpetual wars; the barbarians from time to time ravaged the provinces, and a pestilence, which began in A. D. 252, visited, in the course of fifteen years, every part of the ancient world.

Mr. W. S. Dallas read a paper "On Foraminifera," with especial reference to a small collection of fossils belonging to this group, presented by Mr. E. W. Dallas. He stated that his principal object was to call the attention of those members of the Society who were attached to the study of Natural History, to a most interesting class of objects. After describing some of the forms assumed by the minute but beautiful chambered shells formed by the animals of this group, Mr. Dallas indicated the different views which had been entertained

by Zoologists as to their place in the Animal Kingdom, and showed that although they had been regarded by Cuvier, Lamarck, D'Orbigny and others, as Mollusca allied to the highly organised Nautili and Cuttle Fish, the researches of Dujardin and subsequent naturalists abundantly proved that their place was far lower in the system, their nearest allies being the Infusorial Animalcules. After referring to the beauty and complexity of structure of the shells, contrasted with extreme simplicity of organisation of the animals, the paper called attention to the abundance of the Foraminifera in our present seas, and to their existence in still greater profusion in some geological periods,—many beds of rock of great thickness being almost entirely built up of their remains.

APRIL 5—The Rev. John Kenrick read the first part of a paper by the late Rev. Charles Wellbeloved, "On the Information respecting the state of York, during the 14th and 15th centuries, derived from Wills in the York Registry." It consisted of a series of notes with commentaries, made from the "Testamenta Eboracensia," published by the Rev. James Raine. The Wills of the Plantagenet, Tudor and Stuart reigns are for the most part written in Latin. Some are in English, and a few in French; sometimes a part is written in Latin and a part in English, or a codicil or inventory in English is added to a Latin Will. Even in those written in Latin, English terms frequently occur, sometimes very oddly intermingled. wills appear to have been made by professional persons,—the proctors, the parish priest, or some one who obtained his living by writing. In the year 1391, William de Kyrkby of York, describes himself as scriptor; that he is a layman is evident, as he directs that he be buried near his wife in St. Elen's Church, and leaves his property to his two daughters. In the same year, Ellen, the wife of Marmaduke Thweng, of Cornborough, made a nuncupative will, because no writer was at hand. Of these nuncupative wills, two affecting examples occur. In 1346, before joining the forces mustering to oppose David of Scotland, who had advanced as far as Durham, Sir William de Crathorne went into his parish church to declare his will, in the event of his falling in the field. From this expedition he never returned, and his widow afterwards appeared before the Commissary of the Archbishop, at Cawood, and was admitted to prove her husband's will, by the production of witnesses who deposed that they were present in the church when he made it. The other instance is that of Sir Ralph Newmarche, of Whatton, who made his nuncupative will at

Shrewsbury, in 1403, the day after the battle, and probably when in the agonies of death from wounds received on that celebrated field.

Most of the wills contain a bequest "ad fabricam Ecclesia B. Petri." It cannot be inferred from these words that the rebuilding or repairing of the Church was going on at that time. But the completion of the Chapter House and the Nave was then proceeding, and in some instances this clearly appears from the bequests. These are not always in money, but books, wearing apparel, and other property are left to be sold, and the produce added to the bequest. Thus, Thomas de Austan, one of the Vicars Choral of York, leaves to the fabric three of his largest stills, for the distillery of aqua vitæ, and waters of flowers and herbs; John Awstyn, a carpenter of York, leaves to the new work of the Cathedral all his brass pullies; and Joanna Skargill bequeaths for the same purpose her scarlet gown. William Barker, of Tadcaster, leaves to the fabric at York a boat-load of stone from the quarry of Thevesdale, near Tadcaster, granted by the Vavasour family. W. Gowsell, husbandman, of Heworth, leaves one horse, probably to be employed at the Cathedral. In the year 1409, William Cawode, Canon of York and Ripon, an eminent lawyer and diplomatist, bequeaths his whole library to be sold, the produce to be applied to ornamenting the high altar with a screen. There are other legacies relating to works in the interior of the Minster—the erection or adorning of the altar, the founding of chantries, the offerings at shrines, and the decorations of sacred images. In 1349, Archbishop William de la Zouch left a sum of money for the ordaining of a perpetual charity for his own soul, at which two chaplains were to serve for ever in honour of God, the blessed Mary, and all Saints, especially Mary Magdalene and St. Martha.

The shrine, or bier of Saint William, which was of silver splendidly adorned with gilding and jewels, was the object of frequent bequests. To this shrine several persons left rings set with stones, and a chaplet of gold set with pearls and emeralds, with a sapphire in the middle, and a diamond above it. In 1444, Thomas Karr, citizen and draper, bequeathed money to purchase a gold chain for the neck of the Virgin Mary, another for that of the infant in her arms, and a gold ring to be placed about the neck of the image of the Virgin. Costly articles of gold and silver and jewels are specially bequeathed for the use of the High Altar. Books are the last class of bequests noticed in this part of the paper. One of the most remarkable of these is that of John Dawtre, who leaves to his godfather, Wm. Langton, the use during life of a certain book which the blessed Richard le Scrop had

and carried in his bosom at the time of his being beheaded; beseeching him that he would order that after his death it should be chained near the place where the body of Richard le Scrop had been buried, there to remain. The Archbishop had been much beloved in his diocese, and after his death the people of Yorkshire, who were hostile to the House of Lancaster, resorted to his tomb and made large offerings which were appropriated to the completion of the Choir.

MAY 3.—THE REV. JOHN KENRICK read the conclusion of the late Rev. C. Wellbeloved's paper on the Testamenta Eboracensia, relating partly to the bequests of books and the illustrations which they afford of the state of literature in the Middle Ages. The bequest of John de Newton, treasurer of the Church in 1414, to the Minster Library comprehends Bibles and portions of Bibles, with Concordances and Glosses, works of St. Augustine, St. Gregory, St. Bernard, several Tracts of Alcuin, works of St. Chysostom and St. Thomas Aquinas. To these are joined several English Authors, as Beda de Gestis Anglorum, Alfred of Beverley, John Hoveden, Richard the Hermit of Hampole, Sir Walter de Hilton, and William Ryvington; William de Malmsbury, and Petrarca de Remediis utriusque fortunæ. These wills also contain numerous bequests of books to private individuals. These comprehend a great variety of subjects. Theology and law hold a chief place; but history, poetry, and romance have also their share. Books of science are the most rare. There does not appear a single Greek classic, and only one Roman. Of the early writers of our own country we find mentioned Piers Plowman, Gower, Richard of Hampole, and the celebrated traveller Sir John Mandeville. A copy of a miracle-play is bequeathed to the Fraternity of Corpus Christi, and a book de S. Jacobo Apostolo to the Gild of St. Christopher.

The bequests to the Abbey of St. Mary are not numerous; for it did not stand in high favour with the citizens, and disputes, sometimes accompanied with outrageous violence, frequently occurred. One bequest deserves particular notice. John Carlele leaves in 1309 some articles to the Abbot, 40s. to the Convent ad potum, and 20s. to the fabric of the bell tower, which was therefore probably still in course of erection 120 years after the foundation stone of the church had been laid by Simon de Warwick. The Hospital of St. Leonard is also mentioned in the Testamenta, and in the will of Richard Russell, an opulent merchant of York in 1435, there is a bequest for the relief of the poor who nightly lodged in the infirmary. Other Hospitals in

the city are also the subject of bequests, as well as the lepers in the lazar houses and the prisoners in the Castle, on Ouse-bridge, and in the prisons of the Archbishop and St. Peter. Numerous bequests also occur to the 52 parish churches which York contained before the Reformation and to the four mendicant orders. Of these the Dominicans were established where the Railway Station now stands; the Carmelites between Stonebow Lane and the Foss; the Franciscans between the Ouse and Castlegate; the Augustinians between the Guildhall and St. Leonard's landing. Almost every page of the Testamenta shows the popularity of these orders, and that not only with the commonalty, for persons of rank and opulence express in their wills a desire to be buried in their churches. Mr. Wellbeloved has also collected various notices of the Anchorites or Ankers, in Latin reclusi or recluse, men and women who lived a perfectly secluded life, either in some part of a church so contrived that Divine Service might be seen, or in some small building or oratory attached to the church. In some cases the seclusion was so strict that a lock was placed upon the cell, and even the entrance closed with masonry. All the Anchorites mentioned in the Testamenta were females. There are also bequests to Gilds and Crafts, and others having reference to pilgrimages, either to the Holy Land or to shrines within the island. In the later wills there are traces of the existence of heretical opinions among the contemporaries of the testators, as they make the unusual declaration that they die in the Catholic faith. In 1428 John Pigott, Esq., of York, leaves ten marks for sustaining the war against the heretics in Bohemia.

Oct. 4.—The Rev. J. Kenrick read some remarks on specimens of the so called Kimmeridge Coal Money, presented by Dr. Smart, of Northiam. The stratum from which they are derived is composed of a bituminous shale, of which an extensive bed exists on the Dorsetshire coast, used by the lower classes as a substitute for pit coal. The specimens, however, to which the name of coal money has been given, are found only in a limited locality in the Isle of Purbeck. They consist of flat circular pieces with bevelled and moulded edges from  $1\frac{1}{4}$  inch to  $2\frac{1}{2}$  inches in diameter, and from  $\frac{1}{4}$  to  $\frac{5}{8}$  of an inch in thickness. They have on one side a small pivot hole and on the other a square hole or two or three round holes, and they are now generally admitted by antiquaries to be the nuclei or circular waste pieces which were left and thrown aside in the process of turning by the lathe. The Kimmeridge coal appears to have supplied to the Romano-British

inhabitants of the Southern coast the place of jet, which is so abundant in Yorkshire, as a material for the manufacture of bracelets, beads, and similar ornaments. Such ornaments have been found in Romano-British sepulchres, but never in those of the primitive inhabitants of Britain. The Isle of Purbeck was the principal seat of this manufacture, and the "coal money" is found there in connexion with Samian and other pottery.

Mr. Noble, bearing on one side the head of Ceres and the legend c. Memmi c. f. (Caii Filius), and on the other side a captive beneath a trophy and c. Memmius imperator. It is uncertain to what member of the Memmian family or to what event the coin refers. The Memmius mentioned in the opening of the poem of Lucretius was Caius, and the Memmius of this coin may have been his son; but there is no record in history of the battle to which the trophy and the title Imperator refer. One of the Memmian family is said to have introduced the Cereal games at Rome, whence the head of Ceres appears on their coins.

Nov. 1.—The Rev. J. Kenrick exhibited a collection of flint implements, from the beds of drift gravel in the valley of the Somme, near Abbeville, and gave an account of the researches of M. Boucher de Perthes and of Messrs. Evans and Prestwich connected with this subject. The implements in question bear unequivocal marks of having been fashioned by the hand of man, and they have been found in beds which geologists call diluvial; hence the conclusion has been drawn, that the existence of man upon the earth is to be referred to an earlier period of its geological history than had been previously supposed. And as the remains of mammalia of extinct species, such as the elephant, rhinoceros, hippopotamus and stag, have been found in juxtaposition with these implements, the further inference has been deduced that man must have been contemporaneous with these extinct species.

Since attention was directed to this subject, evidence confirmatory of M. Boucher de Perthes' discoveries has come to light in England. Flint weapons, similar to those found at Abbeville, and connected with mammalian remains of extinct species, have been found at Hoxne, in Suffolk, by Mr. Evans and Mr. Prestwich, in undisturbed beds of diluvial gravel, lying above the boulder clay. The existence of flint implements in caves, e. g. at Brixham, along with the bones of animals now extinct; and of a coarse pottery united with such remains in

the valley of the Aire near Leeds, points also to the conclusion, that the tribes by whom the flints and the pottery were used, lived upon the earth, while it was still tenanted by species which have since perished.

Dec. 6.—The Rev. J. Kenrick gave an account of some Roman antiquities recently discovered at the Mount. At the depth of 2 ft. 6 in. below the surface, a slab 6 ft. 10 in. long was found, having four incised figures and an inscription in six lines. Being removed it was found to cover a sarcophagus, in which was a body which had been imbedded in liquid plaster. The incised stone which had been appropriated as the cover was not long enough to cover it and another channelled stone had been used to lengthen it. The inscription on the sarcophagus is much decayed, but it imports that it was dedicated to the Manes of Ælia Severa by her husband. From the form of the letters, which have been filled up with red paint, the sarcophagus appears to be considerably older than the slab which covers it, and probably the sarcophagus as well as the slab has been borrowed for a later interment. The remains of the skeleton seem to belong to a male rather than a female. The upper part of the slab which is incised, contains four figures: two of adults, male and female, two of children, also male and female. The inscription, as far as it can be read, is as follows:

D·M·FLAVIÆ·AUGUSTINAE

VIXIT·AN·XXXVIIII·M·VII·D·XI·FILIUS

NUS·AUGSTINUS·VXT·AN·I·D·III

AN·I·M·VIIII·D·V·CÆRESIUS

I·LEG·VI·VIC·CONIUGI·CARI

ET·SIBI·F·C·

It appears therefore that Cæresius, a soldier of the Sixth Conquering Legion, raised this memorial to his wife, Flavia Augustina, who lived 39 years, seven months, and eleven days; to his son, Augustinus, who lived one year and three days, and his daughter, who lived one year, nine months and five days, providing at the same time a memorial for himself, according to a practice very common among the Romans. The figures at the top correspond with this destination of the monument. The stone has received an injury which has obliterated several letters on the left side, so that only the last syllable of the son's first name is legible, and that of the daughter, as well as the military rank of Cæresius, is unknown.

Jan. 3, 1860.—Mr. Procter read a paper "On the Ancient Metallurgy of Lead among the Romans, especially in Britain." Notwithstanding the silence of Cæsar, it seems probable that the leadmines of this country were worked by the natives before the Roman conquest. Leland mentions a plate of lead, found in Somersetshire, inscribed with the name of the Emperor Claudius in the ninth year of his tribunitial power, i. e. a. d. 49, and as this was only five years after his arrival in Britain, it is not probable that the Romans should, in so short an interval, have begun to work lead-mines, if the art had been previously unknown in the island. Pigs of lead have also been found in different parts of Britain, bearing the names of other Roman Emperors.

Pliny notices the abundance of lead in this country, and the facility of working it from its coming to the surface; in this respect, he contrasts the British lead-mines with those of Spain and Gaul. observes that there are two different sources of lead, — its own native ore from which it is produced without admixture, and an ore which contains it in combination with silver. Lead is rarely quite free from silver, but the ancients, from their imperfect knowledge, probably regarded those ores as non-argentiferous, in which silver exists only in minute proportions. From Pliny's account, which, however, contains some obscurities, it is clear that the Romans were in the habit of extracting silver from lead by a process of cupellation; and on several of the pigs found in Britain, we read the words Ex. Arg. or Ex. Argn., which can hardly be explained otherwise than as Ex Argento or Ex Argentifodina. Yet it seems extraordinary that the lead should be described as extracted from silver ore or a silver mine, when the silver is really quite an insignificant admixture with the lead.

Mr. Procter has analysed several specimens of Roman lead from the collection of the Society, with the following results:

	SILVER.				
A lead coffin	0.0066	per cent.			
Do	0.0094	"			
Do	0.0054	22			
A leaden lamp stand	0.0182	"			
A lead pipe	0.0087	>>			
Another lead pipe exhibited merely	a trace	of silver.			
The quantity analysed in each case was 500 gr.					

## DONATIONS TO THE MUSEUM.

## GEOLOGY AND MINERALOGY.

Bravender, F., Esq., (Ciren-	Six specimens of Acrosalenia pustulata,
cester)	from the Great Oolite of Cirencester.
Dallas, E. W., Esq., (Edin-	Fossil Foraminifera, from the Tertiary
burgh)	deposits at Volterra, in Tuscany.
	Two Fossil Sponges, from the Chalk,
Milner, Miss, (Nun Apple-)	Fossil Plants, from the Coal Strata of
	Aldwark, near Rotherham.
Petch, Rev. R., (Pockling-	A Specimen of Asbestos.
	Numerous Specimens of Fossils, from
Street)	the Chalk, Gault and Wenlock Lime-
	stone.
Richardson, Rev. H. (York)	Fossils from the Coprolite Beds of the
	Specton Clay.
Roundell, Rev. Danson Richardson, (Gledstone)	A Collection of Fossils and Minerals.
Tindall, Mr. E., (Bridling-	A Collection of Fossils from the Red Chalk of Spector
	A Specimen of Productus Martini.
	A small Agatized Ammonite, from the
9000)	Lias, near Whitby.
	221009 2002 17 211009

# BOTANY.

Backhouse, Jas., Esq	The Stem of a large Tree Fern.	
Hailstone, Mrs., (Bottisham,	The Herbarium formed by the la	te
Cambridgeshire)	Samuel Hailstone, Esq.	

## ZOOLOGY.

Brown, C. H., Esq., (South-port)	us antiquus.
$egin{array}{cccccccccccccccccccccccccccccccccccc$	lacus maculosus, in
School) spirit.	
Champley, R., Esq., (Scar-) A Photograph of the bro')	e Egg of the Great
bro') Auk.	
North, S. W., Esq., (York) A Specimen of Ura	
Tindall, Mr. E., (Bridling- ton) Three Specimens of	Exotic Land Shells.
Toon, Mr. Thos., (17th) Two Lizards and t	three Centipedes in
Toon, Mr. Thos., (17th) Two Lizards and to Foot) spirit, from Renk	ioi, on the Darda-
nelles.	
Walker, Mr. J. F., (Gilly-gate) Three Specimens of	Limnæus etagnalis.

# ANTIQUITIES.

Calvert, F. W., Esq	A Stone Coffin, and some Cinerary Urns, found in his ground on the Mount.
Ford, John, Esq	Three Flint Arrow Heads, from Castle Howard.
Greenwood, Mr. Wm	A Coin of Alexander Severus.
Jones, John, Esq	A Stone Coffin, and some Cinerary Urns, found in his ground on the Mount.
Kenrick, Rev. John	A Coin of Probus, found at Osbaldwick.
Noble, T. S., Esq	A Coin of Mariniana, and four Silver Denarii.
Procter, W., Esq	A Mediæval Spoon.
Raper, Mr. John, (East) Wilton)	A Penny of Edward.
	The lower part of a Stone Hand Mill.
Smart, Dr. (Northiam, Sus-	Specimens of the so-called Kimmeridge
sex)	Coal Money.

## MISCELLANEOUS.

Edeson, Mrs., (Gillygate) A Burmese Book, and Wooden Mould. Noble, J., Esq., Jun., R. N. Three Chinese Weapons.

## LIBRARY.

Admiralty, Board of	Greenwich Observations for 1857.
Association, British, for the Advancement of Science	Report for 1858.
The Author	Furca et Fossa, by J. Y. Akerman.
The Author	Voyage en Espagne et en Algérie, by
	M. Boucher de Perthes.
The Author	A Natural History of the Animal King-
	dom, by W. S. Dallas.
The Author	Elements of Entomology, by W. S.
	Dallas.
The Author	Reply to the Statements of the Trustees
	of Dudley Observatory, by Dr. Gould.
The Author	Map of Chicago Harbour and Bar, by
	Col. Graham.
The Author	Address delivered at the Anniversary
	Meeting of the Geological Society,
	1858, by General Portlock.
The Author	Address delivered at do., 1859, by Pro-
	fessor Phillips.

The Author	Evidences of the Great Age of Henry Jenkins.
Berwickshire, Naturalists' ) Field Club	Proceedings of.
British Museum, Trustees of	Select Egyptian Papyri in the Collection of the British Museum.
East India Company, The Hon. Court of Directors of	Catalogue of Lepidopterous Insects in the Museum of the East India Com- pany.
Gould, Dr	Defence of Dr. Gould, by the Scientific Council of the Dudley Observatory.
Graham, Mr. D	Sir Wm. Milner's Nomenclature of British Birds.
Hey, Rev. Wm	Catalogue of British Coleoptera, by G. R. Waterhouse, (sheets 1—6).
Institution, Royal, of Great Britain	Proceedings of, part 9.
Institution, Smithsonian	Report for 1857.
Kenrick, Rev. John	Eckhel's Numi veteres Anecdoti, and Vulpes' Illustrazione degli Strumenti Chirurgici scavati in Ercolano e in Pompei, from the Library of the late Rev. Charles Wellbeloved.
Malvern, Naturalists' Field Club	Transactions of.
Monkhouse, Mr. W	Woods on the Fossil Skull of an Ox.
Northumberland, His Grace the Duke of	Mac Lauchlan's Survey of the Roman Wall and Watling Street.
Read, W. H. Rudston, Esq.	Proceedings of the Linnean Society.
Society, Geological	Quarterly Journal, vol. xiv., parts 3 and 4, and vol. xv.
	Proceedings, Nos. 1—25.
Society, Chemical	Quarterly Journal.
Society, Geological & Polytechnic, of the West Riding	Reports of.
Society, Leeds Philosophical and Literary	Report of. Sir J. F. W. Herschel on Sensorial
	Vision.
	J. Crawfurd, F. R. S., on China and its
	Trade.
Society, Boston, of Natural)	
History	Proceedings, vol. vi., sheets 11—22.

Society, Sheffield Literary and Philosophical	Report of.
Society, Literary and Philosophical, of Liverpool	Proceedings of.
The Translator	Siebold on a True Parthenogenesis in
	Moths and Bees, translated by W. S.
	Dallas.
Tyneside Naturalists' Field	Transactions of.
United States Coast Survey	Report of the Superintendent for 1856.
Wellbeloved Memorial-	Mr. Wellbeloved's copies of "Drake's
Fund Committee	Mr. Wellbeloved's copies of "Drake's Eboracum" and Horsley's "Britannia
	Romana."

### SERIAL WORKS SUBSCRIBED FOR.

A Monograph of the Trochilidæ or Humming Birds, by John Gould, F. R. S. (18 parts published).

Birds of Australia, by the same, supplementary parts (3 published).

Birds of Asia, by the same (11 parts published).

Exotic Butterflies, being illustrations of New Species chiefly selected from the Collections of W. Wilson Saunders and W. C. Hewitson. By W. C. Hewitson. (23 Nos. published.)

Fauna Antiqua Sivalensis, or Geology of the Sewalik Hills, in the North of India, by Dr. Falconer and Major Cautley. (Part 1 to 9 of illustrations, and part 1 of Letterpress).

Proceedings of the Zoological Society, with Illustrations.

Publications of the Palæontographical Society.

Publications of the Ray Society.

Sowerby's Thesaurus Conchyliorum, col. plates (17 parts published).

Crania Britannica, or Delineations and Descriptions of the Skulls of the Aboriginal and early Inhabitants of the British Islands, by J. B. Davis, F.S.A., and J. Thurnam, M.D., F.S.A. (3 Parts published).

London, Edinburgh, and Dublin Philosophical Magazine.

Annals and Magazine of Natural History.

The Geologist.

Archiv für Naturgeschichte.

### WORKS PURCHASED.

Murchison's Siluria, new edition.

Decades of the Geological Survey of Great Britain.

Sowerby's Illustrated Index of British Shells.



### YORKSHIRE MUSEUM ENLARGEMENT FUND.

#### SUBSCRIPTIONS ALREADY ANNOUNCED.

Aitken, Wr. Henry, York	s. d. 1 0	£. s. d. Lawley, The Hon. Robt., Hutton Hall 5 0 0
Aitken, Mr. Henry, York 1 Agar, John, Esq., Brockheld 5 Akroyd, Edward, Esq., Denton Park 5 Aldam, Wm., Esq., Frickley Hall 5	0 0	Lawley, The Hon. Robt., Hutton Hall 5 0 0 Lawley, The Hon. and Rev. Stephen W., Eseriek 5 0 0
Akroyd, Edward, Esq., Denton Park 5	0 0	Lawley, The Hon. and Rev. Stephen W., Eseriek 5 0 0 Lee, W. T., Esq., Grove, Ferrybridge 5 0 0
Allis Thos Esa Osbaldwick 2	0 0 0	Leeds, Duke of (the late), Hornby Castle 5 0 0
Allis, Thos., Esq., Osbaldwick 2 Backhouse, Thos., Esq., York 1	1 0	Leeman, Geo., Esq., York
Balme, E. B. Wheatley, Esq., Cofe Wall 5	0 0	Lloyd, Miss, York 5 0 0
Barlow, Miss, York 5 Bayly, The Rev. Thos., York 1 Beaumont, W. B., Esq., Bretton Hall, Wakefield 5 Rockett W. E., Esch. Wilder Community Communit	0 0	Lloyd, Edwd., Esq., Holtby 5 0 0
Bayly, The Rev. Thos., York 1 Beanmont, W. B., Esq., Bretton Hall, Wakefield 5	1 0 0	Lloyd, Geo., Esq., Stockton
Beckett, Wm., Esq., Kirkstall Grange 5	0 0	Londesborough, Lord (the late), Grimston Park 10 0 0 Lowther, Sir J. H., Bart., Swillington 10 0 0
Beckett, Wm., Esq., Kirkstall Grange         5           Bell, Fred., Esq., Thirsk         2           Bolton, The Lord, Bolton Hall         5	2 0	
Bolton, The Lord, Bolton Hall	0 0 0	Mason, T., Esq., Castlegate       5 0 0         Mason, Thos., Esq., Copt Hewick       5 0 0         Mawdesley, Fredek., Esq., York       5 0 0         Meek, James, Esq., Middlethorpe Lodge       5 0 0         Meek, James, Esq., Widdlethorpe Lodge       5 0 0         Middleton, The Lord, Birdsall House       10 0 0         Mills, L. B., Esc. Vol. Birdsall House       10 0 0
Bower, Robt., Esq., Welham House 5 Boynton, Sir H., Bart., Burton Agnes 5	0 0	Mason, Thos., Esq., Copt Hewick
	2 0	Meek, James, Esq., Middlethorpe Lodge 5 0 0
Briggs, Major, York 2 Brown, James, Esq., M. P., Rossington 10 Butterfield, J. M., Esq., York 2 Carbiel, The Eval of Carbiel Leyrond 10	2 0	Meek, Jas., Jun., Esq., York 5 0 0
Brown, James, Esq., M. P., Rossington 10 Rutterfuld I M Fea Vork	0 0 2 0	Middleton, The Lord, Birdsall House 10 0 0
	0 0	Mills, J. R., Esq., York       5 0 0         Mitford, Admiral, Hunmanly       5 0 0
Catheart The Earl of 5	0 0	Moukhouse, Mr. Wm., York
Cator, The Rev. T., Womersley	0 0	Montagn, Andrew, Esq., Melton Park 5 0 0
Cator, The Rev. T., Womersley 2 Charlesworth, I. C. D., Esq., Chapelthorpe Hall 5 Childers, J. W., Esq., Cantley Hall 5	0 0 0	Moore, Mr. Frank, York         1         1         0           Musgrave, The Ven. Archdeacon, Halifax         5         0         0
Cholmiey, Col. (the late), Howsham	0 0	Newman, W. L., Esq., York 2 2 0
Cholmley, Miss, Fulford Lodge 5	0 0	Northumberland, The Duke of Alpwick Castle 10 0 0
Christie, Jas., Esq. (the late), Melbourne Hall 5 Clayton, T. G., Esq., Bessingby Hall 5	0 0 0	Oldfield, George, Esq., York         5         0         0           Oldfield, Joshua, Esq., York         5         0         0           Phillips, Prof. John, Oxford         2         2         0
Collins, The Rev. Thos., Knareshoro' 5	0 0	Oldfield, Joshua, Esq., York         5         0         0           Phillips, Prof. John, Oxford         2         2         0
Cooke, C. E. S., Esq., Greenbammerton Hall. 5 Cooke, The Rev. R. B., Wheldrake 2	0 6	Present, Robt., Esq., Yorkshire Club 5 0 0
Cooke, The Rev. R. B., Wheldrake 2	2 0	Preston, T. II., Esq., Moreby Hall 5 0 0
Cooke, Miss Louisa, South Dalton 1 Coore, H., Esq., Seruton 2	0 0 0	Pulleine, James, Esq., Crake Hall 5 0 0
Copley, Geo., Esq., York 5	0 0	Radcliffe, Sir J., Bart., Rudding Park 10 0 0 Raines, Wm., Esq., Wyton 2 0 0
Copley, Geo., Esq., York 5 Creyke, R., Esq. (the late), Raweliffe Hall 5 Croft, Stephen, Esq., Stillington Hall 5	0 0	Rawdon, Frederic, Esa, Stockton, Vork 5 0 0
	0 0	Read, Wm. H. Rudston, Esq., Hayton 5 0 0
Crompton, Joshua, Esq., Azerley Hall. 2 Cromptons. The Miss 2	0 0 0	Reed, Wm., Esq., York       2       2       0         Reynard, E. H., Esq., Sunderlandwiek       2       0       0
Cromptons, The Miss 2 Crossley, John, Esq., Halifax 5 Davics, Robt., Esq., The Mount, York 5 Dawnay, The Hon, Payan Repinchyough Hall 9	0 0	Richardson, Hv., Esq., Cherrybill, York 1 0 0
Davies, Robt., Esq., The Mount, York 5	0 0	Richardson, Wm., Esq., York 5 0 0
Dawnay, The Hon. Payan, Beningbrough Hall 2 De Grey, Earl (the late), Studley Park 10	2 0 0 0	Robinson, Henry, Esq., York 5 0 0
De Grey and Ripon, The Earl	0 0	Roundell, The Rev. Danson R., Gledstone 5 0 0 Rowntree, Joseph, Esq., York 5 0 0
De L'Isle, The Lord, Ingleby Manor 5	0 0	Rowntree, Joseph, Esq., York       5       0       0         Rutson, Wim., Esq., Newby Wiske       5       0       0         Salt, Titus, Esq., Saltaire, Bradford       5       0       0
Dent, Joseph, Esq., Ribstone Hall 10	0 0	Salt, Titus, Esq., Saltaire, Bradford 5 0 0
Dent, John Dent, Esq., M. P., Do	0 0 0	Sumpson, Dr. Thos., York 5 0 0
Duesbury, W. D. T., Esq., Beverley 5	0 0	Slingsby. Sir Chas., Bart., Seriven Park 5 0 0 Smyth, Col. J. G., M. P., Heath Hall 5 0 0
Dungomba The Hon Admiral Kilnwick Donor 5	0 0	Sotheran, Mr. H., York 1 1 0
Duncombe, The Hon. Octavins, Waresley Park 5 Duncombe, The Hon. V. E., M. P., Aiskew 5 Dundas, The Hon. J. C., Woodall 5 Dyson, Wm., Esq., York 1 Filis, Thomps, May Vol. 1	0 0	
Duneombe, The Hon. W. E., M. P., Aiskew 5 Dundas, The Hon. J. C., Woodall 5	0 0 0	Stanbope, Speneer, Esq., Cannon Hall 5 0 0 Stansfield, Wm. Rookes Crompton, Esq., Esholt
Dyson, Wm., Esq., York	1 0	Hall 5 0 0
mis, momas, asq., rork	2 0	Stillingfleet, The Rev. E. W., Hotham 2 0 0
Ellison, Rich., Esq., Sudhrooke Holme, Lincoln 10 Elsley, C. H., Esq., York	0 0 0	Stourton, The Lord, Allerton Park 5 0 0
Farrer, Jas., Esq., Ingleborough 5	0 0	Stourton, The Hon. P., Holme Hall 5 0 0 Swaine, Edw., Esq., York 2 2 0
Farrer, Jas., Esq., Ingleborough	0 0	Swaine, Edw., Esq., York       2       2       0         Swann, Clough, & Co., York       20       0       0         Swire, The Rev. John, Manfield       2       2       0
Fitzwilliam, Earl (the late), Wentworth House 50 Fox, Geo. Lane, Esq., Bramham Park 5	0 0	Swire, The Rev. John, Manfield 2 2 0
Fullerton, John, Esq., Thrybergh Park 5	0 0 0	Sykes, Rev. Christr. (the late), Roos 5 0 0 Telford, H., Esq. (the late), York 5 0 0
Garforth, Wm., Esq., Wiganthorpe 5	0 0	Telford, H., Esq. (the late), York
Fox, Geo. Lune, Esq., Brainham Park 5 Fullerton, John, Esq., Thrybergh Park 5 Garforth, Wm., Esq., Wiganthorpe 5 Gaseoigne, F. C. T., Esq., Parlington Hall 10 Gott, Wm., Esq., Leeds 5 Graham, Mr. David, York 1 Gray, William, Esq., York 1 Greenwood, John, Esq., M. P., Swareliffe Hall 2 Grimston, H. E., Esq., Etton, Beverley 5 Guy, Mr. James, York 1 Hallston, Edwd., Esq., Horton Hall 1	0 0	Tempest, Sir Charles, Bart., Broughton Hall 5 0 0
Graham, Mr. David, York	0 0 1 0	Thompson, Mr. Edwin, York
Gray, William, Esq., York	0 0	Thompson, H. S., Esq., Kirby Hall 10 0 0 Thompson, Leonard, Esq., Sheriff Hutton Park 5 0 0
Greenwood, John, Esq., M. P., Swarcliffe Hall 2	2 0	Toulson, S. P., Esq., Skipwith Hall 2 0 0
Guy Mr James Vork	0 0 1 0	Tower, Col., Middlethorpe Manor 5 0 0
Hailston, Edwd., Esq., Horton Hall 1	0 0	Wade, Edwin, Esq., York       1       1       0         Walker, Jas., Esq., Sand-Hutton       5       0       0
Hall, The Rev. C., Terrington 5	0 0	Watt, Francis, Esq., Bishop Burton 5 0 0
Hall, James, Esq., Scorboro' 5	0 0	Webb Wm Fee Sion Hill 5 0 0
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London 5	0 0	Wenlock, The Lord, Escriek Park
Harcourt, Oc. Vernon, Esq., Swinton Park 5	0 0	Wentworth, Godfrey, Esq., Woolley Park 5 0 0 Westhead, J. P. Brown, Esq., M.P., Lee Castle 5 0 0 Wharncliffe, The Lord, Wortley Half 10 0 0
Harland, W. C., Esq., Suttou Hall 5	0 0	Wharncliffe, The Lord, Wortley Hall 10 0 0
Harrison, W. II., Esq., Beverley 2 Hawke, The Lord, Womersley Park 5	2 0 0	Wharton, J. T., Esq., Skelton Castle 5 0 0 Wharton, J. T., Esq., Aherford 2 0 0 Whytehead, Henry Yates, Esq., M. D., Craike,
	0 0	Whytehead, Henry Yates, Esq., M. D., Craike,
Higgins, Godfrey, Esq., Skellow Grange 5	0 0	Easingwold 5 0 0
Hildyard, John R. W., Esq., Hutton Bonville 5 Hodgson, Ellis, Esq., Skelton	0 0 1 0	Wickham, H. W., Esq., M. P., Kirklees Park 5 0 0
Higgins, Godfrey, Esq., Skellow Grange. 5 Hidyard, John R. W., Esq., Hutton Bonville 1 Hodgson, Ellis, Esq., Skelton 1 Hotlan, The Lord South Dalton Hall 5 Leaders, Leader B. Bl. 1, Mar. 1	0 0	Wilson, John, Esq., Seaeroft Hall
inguam, Joshua, Esq., Diake Hall	0 0	Woodd Booil T For M D Commodent II-11 F o o
	0 0	Woodall, John, Esq., Searhoro' 5 0 0
Johnson, Mr. Riehard, York 1	0 0 1 0	Yarburgh, Geo. J., Esq., Heslington Hall 5 0 0  York, Edwd, Esq. Wighill Park 5 0 0
Jones, Heywood, Esq., Badsworth Hall 5	0 0	Woodal, Bash I., Esq., at.F., Conyngian Hall         3         0           Woodal, John, Esq., Searhoro'         5         0           Yarburgh, Geo, J., Esq., Heslington Hall         5         0           York, Edwl., Esq., Wighill Park         5         0           York, His Grace the Archibishop of         10         0           Verba, Laberte         10         0
Kenrick, The Rev. John, York 5	τ ο 0	torke, John, Esq., Dewerley Hall 3 3 0
Key, The Rev. S., Water-Fulford 5	0 0	Zetland, The Earl of, Aske Hall 10 0 0

It is earnestly requested that those Members of the Society or others who are willing to assist in liquidating the debt incurred (£453 in addition to the money above subscribed, see Report, page 11), will communicate with the Secretary, Museum, York.

#### ADDITIONAL SUBSCRIPTIONS.

Bayley, Sir John, Bart. Calvert, F. W., Esq., York Fitzwilliam, The Earl Hill, The Hon. Mr. Justice Morritt, W., Esq., Rokeby Peel, Jonathan, Esq., Knowlmere Manor, Clitheroe 'rice, Edwin, Esq., Barrister-at-Law	2 19 5 5	0 2 0 0 0	0 0 0 0 0		-	Robinson, E., Esq., Thorp Green   2	2 0 0	0 0 0 0 0 0
nee, Edwin, Esq., Darrister-at-1.aw	2	2	Ü			Wright, J., Esq., Bilham House, Doncaster 2	0	0











